

Last Winter, when the severe cold had killed the little Creatures, observing the water thawed by the warmth of the room, in which it had stood for a whole day with a fire in it, I found, after 24 hours were elapsed, and another time, after 17 hours were passed, that some living Animals appeared again in that water. When I shall write next, I intend, for further satisfaction, to assert and confirm the truth of what I have related by the testimony of divers Eye-witnesses. I remain, Sir,

Delft, March 23, 1677.

Your, &c.

The Continuation of the Hortulan and Rural Advertisements, promised in the next foregoing Tract; communicated by the same hand, Dr. John Beale.

THe Tract of March, having, as to these Hortulan Observations, ended with the fifth paragraph; we now proceed to the

Sixth, which is to give notice, That the *Cider-Engins* for the more speedy and commodious making of *Cider* and *Perry*, (as these Engins are now made by *Henry Allun*) may be seen at the Cabinet in *Exeter-street* near the *Savoy*; and in the *Palace-yard, Westminster*. They may be compared with the *Cider-Engin* belonging to the *Cider-houses* at *Queen-Hysh*, as also with those belonging to the *Cider-houses* beyond the *Tower*; and with the Engins invented by Mr. *Wolridge* of *Petersfield* in *Hampshire*, and the formerly mentioned in N. 124, 583. An Ingenious Gentleman in this neighbourhood, the Owner of *Clifton*, a mile hence, having a *Corn-mill* and a *Malt-mill*, on a stream near his house, hath lately built a *Cider-mill* on the same stream, where it runs through his Orchard, and 'tis said to grind Fruit perfectly well, and with incredible dispatch. The upper stone is fitly hollow'd. The work done by an ingenious Joyner or Carpenter in a neighbouring Village. And I hear, that others are now devising to make *Cider-mills*, like *Malt-mills* to be drawn about with a Horse or two, as their occasion shall require. Mr. *Tarranton* in his *Improvement and Dialogue*, p. 106, &c. describeth the *Wind-mills* and *Water-mills*, which he had seen amongst Forreigners for the great benefit of the *Cloathing-trade*. I have long since seen three Mills, a *Paper-mill*, a *Fullers-mill* for the benefit of *Bewdley*, and a Mill to grind *Scyths* and other Utenfils of Husbandry, on the stream which feeds the

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three fair Fishponds at *Hurscourt-lodge*, near *Kidderminster* in *Worcestershire*. And I have marvelled, that in this Age of expert Engineers amongst us, we have not yet any Floating-mills to grind Corn upon some of our Rivers, as in *France*. I thought it a strange and pleasant sight, when the *Loire* about *Orleans* was all over cover'd with thick Ice, to see some hundreds, as we thought, of their floating Corn-mills drawn up into the *Loiret*, within sight of the Spring-head, from which the River flows immediately. We may have need of such help, where *Wears* *, which hinder the making of our Rivers navigable, shall be broken down. Some years ago I have seen Engins bought at *London* about 4 *l.* or 5 *l.* price, to grind Wheat or Bread-corn by the hand-labour of a man, sufficient for a full Family, without much charges. And so was all our Malt groun'd by domestick Malt-mills, in my memory. The Ancients did grind all their Corn, or pound it in Cities and in Armies, even in *Rome*, in the Age of her grandeur, by mens handy labour. And because many do discourage themselves from planting Cider-orchards, saying, that if they had the fruit, they should yet want many matters too costly for them: For their sakes, I shall here instance, that in all the neighbourhood round about us, they that make 20 hogsheads of Cider yearly, and much more, do pound all their fruit in Troughs, made for the purpose deep and strong, with broad-footed pounders, one, two, or three (as their need requireth) pounding together in the same Trough. And to me they hold the paradox stoutly, That without more cost or trouble, this is the best and cheapest way. Workmen are cheaper in the Country at some season, than in some Cities. And 'tis a charity to employ Men that want employment, rather than Beasts; and sometimes 'tis unsafe to trust, either to the Winds or to the Water. The Needle-makers will not take it well, that Needles should be made as easily, and cheap as Pins: Nor Glafs-houses, that Glafs should be made malleable.

*Wears are Artificial Rocks, or Stone-walls, formerly made in great Rivers, to lead or raise a part of the stream for Corn-mills; which Wears must all be demolish'd, before the River can be made navigable.

Sir, you said very well, that Cider-Orchards and Household-Gardens are convenient Adjuncts for Trades-mens granaries, *N. 131. p. 796*. But perhaps the truth of that expression extends

further than you are aware of. I shall explain it by Instances, which are here apparent before our eyes, and do seem to me worthy to be considered in most other parts of *England*. Cider (you know) costs no fuel to brew it, and the labour is but once in the year. 'Tis drawn by divine Chymistry; so many Trees, so many huge Alimbecks, which attend to that divine work constantly all the year; they need no Furnaces, to send forth a corroding smoak to choak all the City, to strangle them into Consumptions, and to corrupt all beauties and amenities. Neither Iron, Steel or Marble can resist the fumes of Brewing-houses; whereas Cider is of a thousand kinds ('tis as hard to number all sorts of Apples and Pears, as to number all sorts of Grapes and Figs,) proper to cure many diseases; and a kind vehicle for any healing Vegetable, or other Medical matters. To speak modestly and without an hyperbole; the Cider of the best Pepins duly ripened and kindly fermented, is a peculiar remedy for the Consumption; and generally all strong and pleasant Cider (as we have here) exciteth and cleanseth the stomach (which, if foul, is esteem'd by famous Physicians the Mother of all diseases :) It strengthneth digestion and infallibly frees the Kidneys and Bladder from breeding the Gravel and Stone. This is (above all) the peculiar excellency of the right Red-strake of *Irchin field*, when it escapes all sophistications. But that which makes Cider fittest to accompany the Trades-mens granary, is, that if it be made of right Cider-fruits, so that it be full bodied, and strong, it will hold good without decay, and will yearly be much improved for some years, to the next plentiful year; as usually it falls out, and best of all in large Vessels; the larger, the better. Tradesmen should not be for bottled-Cider, which is commonly more windy, than healthful. It hath been tried from my Childhood in Vessels of 14, 15, or 16 hogsheads, of the free household measure, containing between 60 or 70 Statute-gallons. I have been often told, that Sir *John Winter* had a Vessel, which contained 30, or at least 28 hogsheads. So that now for a fit match to a Granary (as Cider increaseth here) we have need to think of the great Vessel at *Heydelberg*, described in your *Numb.* 130. p. 768. If it be the same Vessel, which was made by *Michael Vernains*, and holds good still; it must be of long durance. For, this Cooper was famous (as I have

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it from good Authors) for making such a huge Vessel for Prince *Frederick* Elect. Palatine of *Heydelberg*, An. 1591. And a far greater, An. 1593, 1598. for Prince *Henry Julius*, Duke of *Brunswick*. Sir *John Winters* Vessel is said to be hooped with Plates of Iron; these with Timber. To conclude this point soberly; When the Citizens shall ordinarily drink Cider well-diluted, as the *French* drink Wine, and as the sober people in all our Cider-countreys drink their washings of Cider (as they call it) and Cider well diluted in the grinding time, and as they drink in *London* their Six shilling Beer, I am perswaded, it will much conduce to the health, which is the life of the people; For, *Non est vivere, sed valere, vita*. And I have often heard Labouring people affirm, that they are more strengthened for hard work by Cider largely diluted, than by very good Beer.

Yet I have much more to say for Household-Gardens, as a fit Match for Granaries. *Cato*, the Oracle of *Rome*, undertakes by copious Instances in his positive style, that *Coleworts* are a cure for all Sores and Diseases. His Universal medicine, *Coleworts* and *Cabbages*, with a little care, hold out seven or eight months. We have them all the year round; good sauce for Bacon as red as any Rose, as they have it in *Herefordshire*, where the Swine will get a share of the fruit, which fall from their hedges: And the Bacon of *New Forrest* is generally commended. These are in good houses always at hand; and may be easily dressed without waste of much time. But Roots of all sorts, Rapes, Turneps, Carrots, Parsneps, Skirrets, Potado's, do challenge the precedence before Granaries: They are a kind of *under-ground Granaries*, and do oftentimes hold out, when Corn faileth; specially the Potado's of *Barbados*, or of *Virginia*. The Potado's of *Barbados* (in our fresh memory) relieved *Ireland* from two years Famine, when their Corn failed there: As *Chestnuts* relieved *France* in the extremity of their Civil war, when their Ploughs were forsaken. These Potado's cost little or no culture, for ten years together, being only covered with Fern, or other light muck, and that turn'd in with the Earth; and two or three Roots, as often as there is occasion to take any of them up for use. And they should be taken up, here and there, (by small parcels,) where

they grow thickest. A few Acres of these will run far to furnish a City, and the Country round about.

Before and since you gave notice of them from me to the *R. Society*, they have been sold in the Markets of *Bristol* and *Wells*, at the price of four shillings *per* bushel; dear enough in respect of the easie propagation and easly culture, and cheap enough in respect of their use. Children of poor people thereabout, eat them raw (instead of Bread and other food) without hurt. Some do roast them in Embers, as they do Wardens; some do boyl them, peel them, and eat them with Butter and Pepper, either served whole, or chopt, as they do Parsneps. Some do strengthen their Beer or Ale, or make good Drink with them. So they are, to them, instead of Corn and Malt, and an acceptable Treat. Every way they are a strong and wholesom nourishment for Labourers. Some do parboyl them slightly, peel them, and mince or cut them in small bits, mingle them with slices of Fat flesh, seasoning all to their palate, and bake them in Pyes or Pastyes; and they esteem them a restorative delicacy, not much inferiour to Artichocks. Artichocks were once a dainty for Emperours, saith *Muffet*; and were (in his remembrance) sold for a Crown apiece in *England*. Now they are cheap, and vulgar in *France* for more than half the year; and are eaten raw there with Pepper and Salt when no bigger than a Cloak-button, or fried in sweet Oil or Butter, or dressed to their mind, when they come to full maturity. Sir *Hugh Platt* hath taught us, how to keep ripe Artichocks green and fresh for all Christmas, in his *Jewelhouse*, chap. 1. and for Easter, in his *Gloset*, 2. 69. So we may have them young, or ripe for the whole year round.

To return to *Potado's*; I observe them to grow and prosper abundantly in much differing kinds of Soil, from the North of *Shropshire* to the Sea coast of *Dorsetshire*. But they like not a stiff and strong land. I tried them two years in a strong Wheat-land, and could get no good of them there. All the Roots, which were there generated, were little bigger than the bulbs of *Saffron*. In light and hollow land of the hottest ferment (which is commonly of little worth for Corn or Pasture,) there *Potado's* thrive best and taste best. But now I am at a difficulty, whether the great difference, which we find

find in the relish, be from the differing kinds of the Potatoes of *Barbados* and *Virginia*; or, whether those differ in kind (for both have the same resemblance above-ground,) or whether the difference, which we find, be only from the diversity of the Soyl.

That the Soyl makes a great difference, and that all may be careful to chuse a fit Soyl for their Garden-diet, I shall here offer some notable Instances to prove it. All the people here, (the very vulgar,) do find the Carrots, and Turneps or Rapes, from the common Fields of *Meriot*, eight miles from hence, Westward, far to excel other very good Turneps and Carrots in fatness and pleasing relish. And Cabbage-plants from the wide Fields of *Lydiard*, westward of *Taunton* (where they have a rich reddish Soyl) do so far excel all other the best Cabbage plants, that these *Lydiard* plants are bought in all places at 80 miles distance. In the Spring-time, when the ways are pretty deep, I see many Horses pass through this Town laden with *Lydiard*-plants, which they sell here, and in all Town many miles beyond *Salisbury*. All call for *Lydiard*-plants, and give more for them than for many other. They become sooner, and surer, and sweeter Cabbages. And Garden-plants are sometimes much altered in taste and properties, by the accidents of the year. In a drougthy Summer, the Plague then being hot in *London*, we had Carrots in *Northamptonshire* from a kind Soyl, were they were wont to be very good; but then so rank, dry, and earthy, that we could not endure to see them on the Table.

I hear that the Turneps of *Hackney* are better than other Turneps about *London*. We have here very good Turneps, white and yellow, which are fatter and esteemed more restorative. But all *England* wants the *Bohemian* Turneps, blood-red on the outside; which are extold by *Muffet* (as he found them in *Prague*) to be so restorative and delicate, that the Emperour himself nurseth them in his Garden. These Arguments I produce to invite them that have the kindest Soyl for these *underground Granaries*, Potatoes and Turneps, to get them immediately from *Barbados*, *Jamaica* and *Prague*, by Merchants, at the first hand, before they be degraded, or any ways vitiated by more unkind Soyl. And since there is a peculiar sort of
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Black Mulberries, which do far excel the rest for our Junkets, as all our old Books tell us all along down, till within these 1200 years, we must send for them to *Naples* or *Sicily*, or to *Persia*, whence our Silk-trade came. The White Mulberries (as we call them) are for the finest Silk.

The *Spanish* Potado requires diligent culture, much Sun, and a light and pregnant Garden-soyl. In the modern Latin they are called *Glandes Malacenses*, being brought into *Spain* from *Volez Malaga*, a Province in *America*. They report that more than a dozen of their huge *Spanish* Ships were brought at one time to *Sevil* in *Spain*, fully freighted with these Potado's, and were soon dispersed all over *Spain*. We say, the *Spaniard* is slow at every thing: But *they* may say, The *Englishman* in many parts of *England*, is more slow at the best Improvements of our own Country; witness our want of *Vineyards*, of *Groves*, of *Mulberries*, of the best *Chestnuts*, *Wall-nuts*, *Figs*, *Almonds*, which are wanting in most parts, and do not refuse to grow in our Climate. Mr. *Hughes*, in his *American Physician*, saith, The Potado's of *Jamaica*, and of the Leeward Islands, *Barbados*, &c. do much exceed *Spanish* Potado's, and are the best, the most wholesom and delicious Root in the whole World; that some of the Roots are yellowish, or of a golden colour, some white. We wish again, that we had them of all sorts at the first hand, to be tried in light and quick Land, a little shelving towards the South. *Mushrooms* and the *Tuberes* or *Tubera* from *Libya*, were the choicest delicacies of *Rome* for many Ages.

But I am not at leisure to serve Luxury; yet 'tis better, we should have the best at home, than be always at the charges to send for them. And 'tis probable that our own Native soyl will make them wholesom for *Englishmen*.